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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,413	11/13/2001	Kiyoshi Hayashi	10873.836US01	2962

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EXAMINER	
MERCADO, JULIAN A	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/008,413	HAYASHI ET AL.	
	Examiner	Art Unit	
	Julian Mercado	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *8-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-7 and 15-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11/17/03, 2/26/02
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 8-14, drawn to the process of making, classified in class 29, subclass 623.1.

II. Claims 1-7 and 15-23, drawn to the product, classified in class 429, subclass 218.1.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by another materially different process such as one employing a chemical oxidation treatment or non-oxidizing atmosphere.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Douglas Mueller on February 20, 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 1-7 and 15-23. Affirmation of this election must be made by applicant in replying to this Office

action. Claims 8-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102 and 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maeda et al.

Regarding independent claims 1, 3 and 6, Maeda et al. teaches a cobalt compound for use in an alkaline battery comprising cobalt hydroxide, the cobalt hydroxide being in the form of a powder to the extent that cobalt hydroxide particles have an average diameter of 30 μm. (col. 9 line 38-45) The compound includes sodium hydroxide powder. (col. 9 line 46-50) As to dependent claims 2, 4 and 7, the cobalt compound contains manganese. (col. 9 line 39)

As to the limitations in independent claim 1 drawn to "mixing" of the cobalt hydroxide with the sodium hydroxide and "applying a heat treatment to the same", these process limitations have not been given patentable weight as the limitations do not give breadth or scope to the product claim. Limitations in independent claim 3 drawn to "adding a sodium hydroxide aqueous solution" and adding "a solution containing an oxidizing agent" are not given patentable weight for similar reasons. The claimed product appears to be the same or similar to the prior art product insofar as being a cobalt compound including cobalt hydroxide and sodium hydroxide powders. In the event that any differences can be shown by the product of the product-by-process claims, such differences would have been obvious to the skilled artisan as a routine modification of the product absent of a showing of unexpected results. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). It is noted, however, that Maeda et al. specifically teach an atmosphere containing oxygen such as via treatment in air, and further, the temperature range of 90° to 140° C is anticipated to the extent that a disclosed preferred temperature range of 80° to 120° C overlaps therewith. (col. 9 line 48, line 59-63)

Claims 3-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Katsumoto et al. (U.S. Pat. 6,114,063).

Katsumoto et al. teaches a cobalt compound for use in an alkaline battery. (Abstract) The cobalt compound contains nickel. (col. 8 line 7-10, applies to dependent claim 4)

As to the limitation drawn to the compound being "obtained by adding a sodium hydroxide aqueous solution and an aqueous solution containing an oxidizing agent", this process limitation has not been given patentable weight as the limitation does not give breadth or scope to the product claim for similar reasons set forth above. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Additionally, the sodium hydroxide being in solution (as opposed to being in solid form as in independent claim 1 above) is not requisitely presumed to have any effect on the final cobalt compound structure. It is noted, however, that Maeda et al. specifically teaches a cobalt hydroxide powder to which sodium hydroxide (aq.) is added. (col. 12 line 7-12) As to an oxidizing agent in solution, Maeda et al. also teaches that an oxidizing agent in solution such as sodium hypochlorite may be employed as an additional surface-treating method. (col. 11 line 30-40, also as applicable to dependent claim 5)

Claims 15-23 are rejected under 35 U.S.C. 103(a) as obvious over Maeda et al. as applied to claims 1-4, 6 and 7 above, in view of Mori et al. (U.S. Pat. 5,393,616) and Bernard et al. (U.S. Pat. 5,993,995)

Regarding independent claims 15, 18 and 21, Maeda et al. does not explicitly teach a cobalt compound in addition to the cobalt compound of claim 1 or claim 3 (hereinafter the cobalt compound of Maeda et al.). However, Mori et al. teaches a cobalt compound such as cobalt monoxide or cobalt hydroxide powder as an additive to an alkaline battery. (col. 4 line 3-6, col. 11 line 16-20, also applies to dependent claims 16, 19 and 22) The cobalt compound includes

the element zinc. (col. 3 line 53-61, applies to dependent claims 17, 20 and 21) The skilled artisan would find obvious to employ the cobalt compound of Mori et al. in the compound of Maeda et al.'s for reasons such as increasing the capacity and cycle life of the electrode. (col. 4 line 12-13)

As to the cobalt compound of Mori et al. having a solubility higher than the solubility of the cobalt compound of Maeda et al., Mori et al. teaches that the cobalt compound is soluble in alkaline electrolyte (col. 7 line 3-7), while Bernard et al. teaches that cobalt oxyhydroxide is insoluble (col. 1 line 38-47) The cobalt compound in Maeda et al. is present in its oxyhydroxide state (col. 10 line 18-25) Thus, the skilled artisan would find obvious based on these teachings that the relative solubility of cobalt monoxide as disclosed by Mori et al. would naturally flow to be higher than the solubility of cobalt oxyhydroxide of Maeda et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

jam

Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700